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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/735,977	12/15/2003	Guenter Maul	91191	4250

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EXAMINER

DETSCHEL, MARISSA

ART UNIT	PAPER NUMBER
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2877

DATE MAILED: 01/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.		Applicant(s)	
	10/735,977		MAUL ET AL.	
	Examiner		Art Unit	
	Marissa J. Detschel		2877	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 5, 12-14, 19 and 20 is/are rejected.
- 7) ☒ Claim(s) 2-4, 6-11 and 15-18 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>12/15/03</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Priority

Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). The certified copy has been filed in parent Application No. 102 59 186.5, filed on December 18, 2002, in Germany.

Information Disclosure Statement

The information disclosure statement filed on December 15, 2003 has been fully considered by the examiner.

Claim Objections

Claim 8 is objected to because of the following informalities: This claim includes the limitation "a connecting element" in line 6, and then presents a limitation "the connecting elements" in line 8. It is understood from the Applicant's disclosure and figures that the connecting element of the device is a pair of connecting elements (10, 10') connected to one another via a securing means (12).

Examiner suggests that this claim read as "As connecting device having a coefficient of thermal expansion α which deviates from a coefficient of thermal expansion α of two structure elements which are to be connected without stresses, each of the structure elements being gripped by means of a pair of connecting elements which are formed symmetrically with respect to the structure element and the pair of connecting elements being connected to one another via securing means."

Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 12 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. This claim discloses measurement paths that can be built up via laser interferometers with assigned optical elements. Where are these measurement paths and where did they come from? Being dependent from claim 1, it is understood by the examiner that the measurement paths of claim 12 arise from the measurement devices of claim 1, but this limitation is not presented in claim 12.

Claim 13, which is dependent from claim 12, inherits the problems of this claims and is therefore also rejected under 35 U.S.C. 112, second paragraph.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

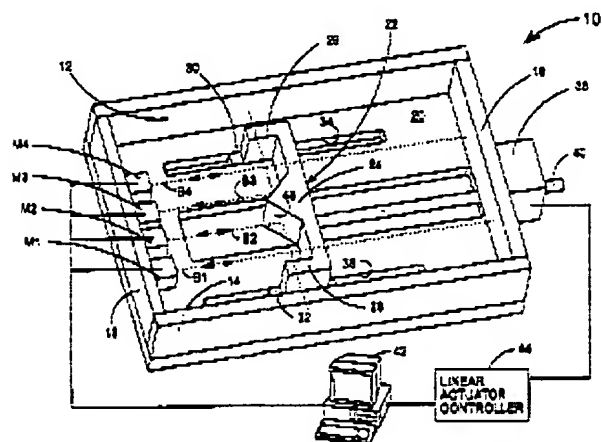
(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

Claims 1, 5, and 14 are rejected under 35 U.S.C. 102(a) as being anticipated by Evans et al. (USPN 6,876,452) as is understood by the examiner.

Regarding claim 1, Evans discloses a device formed from a plurality of structure elements (12, 14, 16, 18) connected to one another and made from at least one material, the at least one material having a very low coefficient of thermal expansion α , wherein the structure elements on which the measurement instruments are arranged

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(16 and 18) are secured between at least two structure side parts (12 and 14) in such a way that the thermal expansions of the structure have no effect in the measurement direction of the measurement instruments (column 4, lines 36-44 and see figure below).



Regarding claim 14, the device of Evans holds an interferometer (column 4, lines 31-32). The measuring systems (M1-M4) of the interferometer and the linear motor (38) that moves the interferometer are fixed to two structure elements (16 and 18).

In regards to claim 5, the plurality of structure elements of Evans' device are made of glass-ceramic or metal alloy (column 4, lines 58-63).

Regarding claim 12, the device of Evans utilizes measurement paths (B1-B4) that are built up via a laser interferometer, with optical elements being assigned at least one laser interferometer for determining position (column 5, line 59 to column 6, line 20), which interferometer is fixedly connected to a structure element (column 5, lines 10-20 and figure above).

In regards to claim 13, absolute position values for the respective optical elements can be calculated from all the values determined by the at least one laser interferometer for determining the position of the optical element (column 5, line 59 to column 6, line 20).

Claim Rejections - 35 USC § 103

Regarding claims 19 and 20, it has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. *Ex parte Masham*, 2 USPQ2d 1647 (1987). The device of claims 1 and 14 can be used for measurements in an imaging device for microlithography and measurements in mechanical precision measurement technology in the nanometer range.

Allowable Subject Matter

Claims 8-11 are objected to due to the minor informalities presented in this office action, but would be allowable if rewritten to overcome these informalities.

Claims 2-4, 6, 7, and 15-18 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

As to claims 2, 7, 15, and 18, the prior art of record, taken alone or in combination, fails to disclose or render obvious a device for holding measurement instruments wherein the structure front part and structure back part are not connected to

the structure elements on which the measurement instruments are arranged, along with the rest of the limitations of said claims.

As to claims 3, 4, and 16, the prior art of record, taken alone or in combination, fails to disclose or render obvious a device for holding measurement instruments wherein the connections of the plurality of structure elements are in the form of connecting elements, along with the rest of the limitations of said claims.

As to claims 6 and 17, the prior art of record, taken alone or in combination, fails to disclose or render obvious a device for holding measurement instrument wherein the structure elements are provided with cutouts, along with the rest of the limitations of said claims.

As to claims 8-11, the prior art of record, taken alone or in combinations, fails to disclose or render obvious a device encompassing two structure elements of a coefficient of thermal expansion being gripped by means of a pair of connecting elements that are formed symmetrically and connected to each other via a securing means.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marissa J. Detschel whose telephone number is 571-272-2716. The examiner can normally be reached on M-F 8:30am-5:00pm.

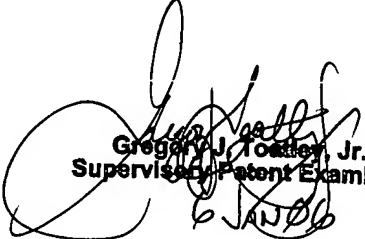
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory J. Toatley, Jr. can be reached on 571-272-2059. The fax phone

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number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Marissa J Detschel
January 5, 2006
MJD


Gregory J. Foster, Jr.
Supervising Patent Examiner
6 JAN 06